

## AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

### **Listing of the Claims:**

1-21. (Canceled)

22. (Currently amended) A transparent, non-elastomeric, ~~polythiourethane~~ poly(thio)urethane/urea material comprising the reaction product of:

- (a) at least one ( $\alpha$ ,  $\omega$ )-diiso(thio)cyanate polysulfide prepolymer, said prepolymer being free from disulfide (-S-S-) linkage; and
- (b) at least one aromatic primary diamine, in an equivalent molar ratio amine function/iso(thio)cyanate function ( $\text{NH}_2/\text{NCX}$ ,  $\text{X}=\text{O}$ ,  $\text{S}$ ) ranging from 0.5 to 2, said aromatic primary diamine being free from disulfide (-S-S-) linkage,

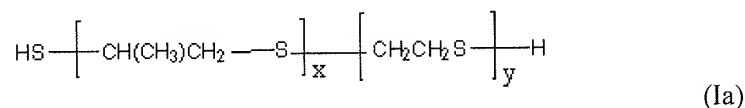
wherein the ( $\alpha$ ,  $\omega$ )-diiso(thio)cyanate polysulfide prepolymer is the reaction product of at least one cycloaliphatic or aromatic ( $\alpha$ ,  $\omega$ )-diiso(thio)cyanate and at least one ( $\alpha$ ,  $\omega$ )-diol or dithiol prepolymer, said ( $\alpha$ ,  $\omega$ )-diol or dithiol prepolymer being a polysulfide or a mixture of polysulfides.

23. (Currently Amended) The transparent, non elastomeric ~~polythiourethane~~ poly(thio)urethane/urea material of claim 22, wherein the equivalent ratio  $\text{NH}_2/\text{NCX}$  ranges from 0.90 to 1.10.

24. (Previously Presented) The material of claim 22, wherein the equivalent ratio  $\text{NH}_2/\text{NCX}$  ranges from 0.93 to 0.95.

25-27. (Canceled)

28. (Previously presented) The material of claim 22, wherein the polysulfide or mixture of polysulfides is a polysulfide of formula:

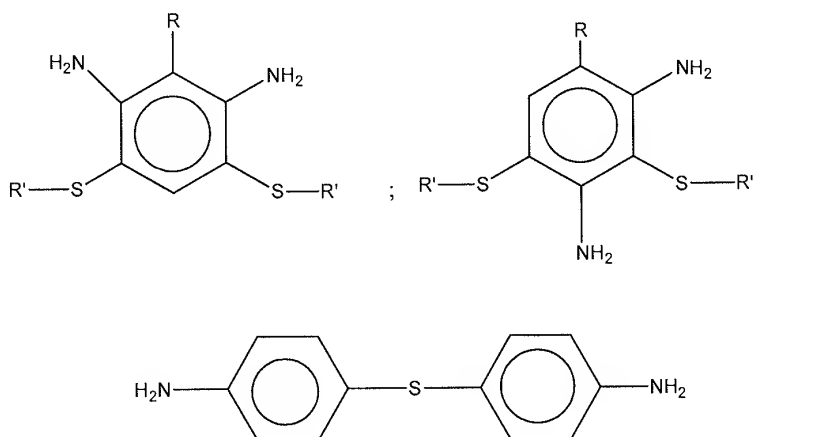


in which x and y are chosen such that the two following conditions are simultaneously satisfied:

- the polysulfide of formula Ia is a prepolymer; and
- the number average molecular weight of the polysulfide of formula Ia is not more than  $3000 \text{ gmol}^{-1}$ .

29. (Previously presented) The material of claim 22, wherein the aromatic diamine contains at least one S atom in its molecule.

30. (Previously presented) The material of claim 29 wherein the diamine is selected from

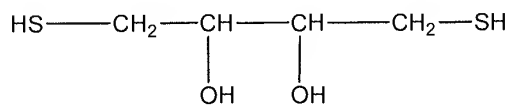
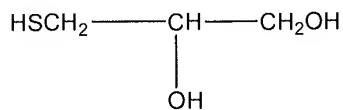
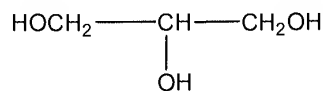
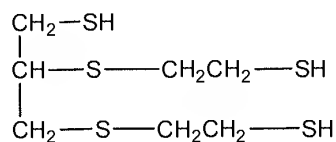
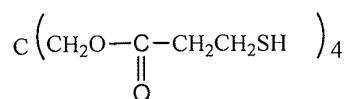
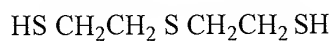


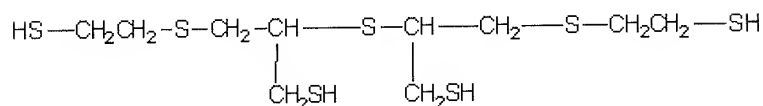
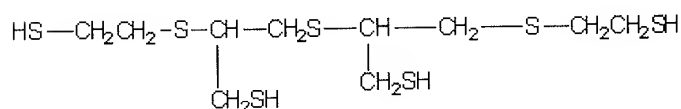
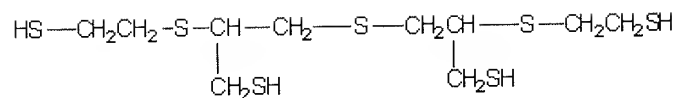
in which R is H or an alkyl group and R' is an alkyl group, and mixtures of the above diamines.

31. (Previously presented) The material of claim 22, wherein the material is the reaction product of:

- a) said at least one ( $\alpha$ ,  $\omega$ )-diisothiocyanate polysulfide prepolymer;
- b) said at least one aromatic primary diamine; and
- c) at least one di-, tri-, or tetra alcohol, or at least one di-, tri-, or tetra thiol, or a mixture thereof.

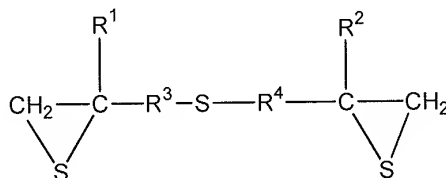
32. (Currently amended) The material of claim 31, wherein the alcohols and thiols are selected from the ~~groups~~group consisting of:



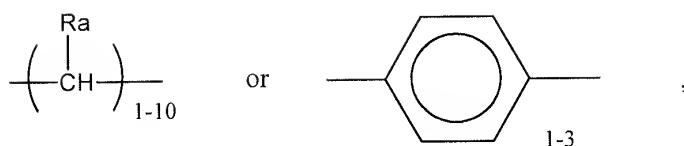


and mixtures thereof.

33. (Previously presented) The material of claim 22 having a refractive index,  $n_D^{25}$ , higher than 1.53.
34. (Previously presented) The material of claim 22 having a refractive index,  $n_D^{25}$ , of at least 1.55.
35. (Previously presented) The material of claim 22 having a refractive index,  $n_D^{25}$ , of at least 1.57.
36. (Previously presented) The material of claim 22, wherein the polysulfide is an hyperbranched polysulfide resulting from the polymerization of a diepisulfide of formula:

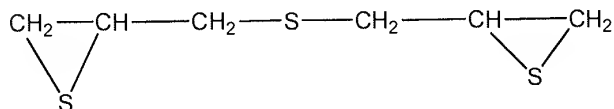


in which  $\text{R}^1$  and  $\text{R}^2$  are, independently from each other, H, alkyl, aryl, alkoxy, alkylthio or arylthio,  $\text{R}^3$  and  $\text{R}^4$  are independently from each other,



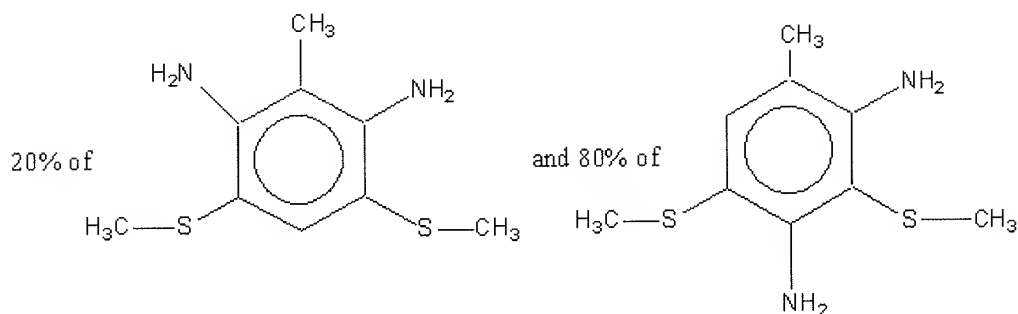
Ra designates H, alkyl, aryl, alkoxy, aryloxy, alkylthio or arylthio, with 2-mercaptoethyl sulfide (DMES).

37. (Previously presented) The material of claim 36, wherein the diepisulfide has formula :



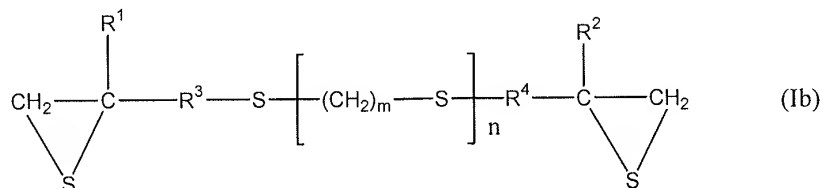
38. (Previously presented) An optical article made from a material according to claim 22.
39. (Previously presented) The material of claim 48, wherein  $n'$  is such that the number average molecular weight ( $\overline{M}_n$ ) of the prepolymer ranges from 650 to 1350 g mol<sup>-1</sup>.
40. (Previously presented) The material of claim 22, wherein the prepolymer is the reaction product of at least one ( $\alpha$ ,  $\omega$ ) dithiol prepolymer.
41. (Canceled)
42. (Previously presented) The material of claim 30, wherein R and R' are CH<sub>3</sub>.

43. (Previously presented) The material of claim 30, wherein the diamine is a mixture of by weight:

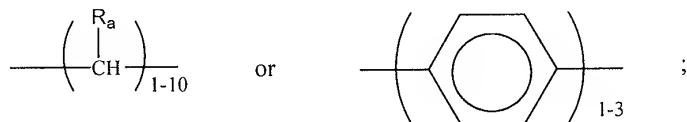


44-46. (Canceled)

47. (Previously presented) The material of claim 22, wherein the polysulfide or mixture of polysulfides is a prepolymer resulting from the polymerization of diepisulfides of formula:



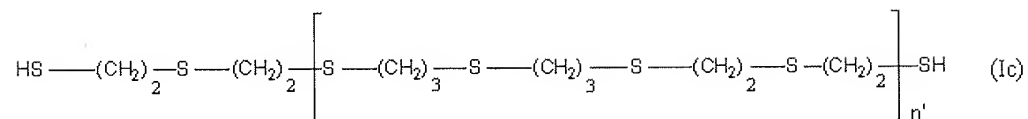
in which  $\text{R}^1$  and  $\text{R}^2$  are, independently from each other, H, alkyl, aryl, alkoxy, alkylthio or arylthio;  $\text{R}^3$  and  $\text{R}^4$  are, independently from each other,



$\text{R}_a$  designates H, alkyl, aryl, alkoxy, aryloxy, alkylthio or arylthio and,  $n$  is an integer from 0 to 4 and  $m$  is an integer from 1 to 6.

48. (Currently amended) The material of claim 22, wherein the polysulfide or mixture of polysulfides is ~~selected from the group consisting of:~~

~~Prepolymers~~ a prepolymer of the formula:



where  $n'$  is such that the number average molecular weight ( $\overline{M}_n$ ) of the prepolymer ranges from 500 to 1500 g mol<sup>-1</sup>.

49. (Previously presented) The material of claim 22, wherein the at least one ( $\alpha$ ,  $\omega$ )-diiso(thio)cyanate polysulfide prepolymer has a number average molecular weight of not more than 3000 g mol<sup>-1</sup>.